

# Chapter 3

## Removal Progress

Throughout the 14-year history of Superfund, removal actions have successfully prevented, minimized, or mitigated threats to human health, welfare, or the environment. EPA and potentially responsible parties (PRPs) have initiated more than 3,360 removal actions to address threats posed by the release or threatened release of hazardous substances, including nearly 310 undertaken in FY94. The expanded use of removals to more rapidly reduce risks posed by Superfund sites is a key element of the Superfund Accelerated Clean-up Model (SACM).

This chapter discusses the removal action process, the progress achieved through Superfund removals in addressing threats to human health and the environment, the contributions of the Environmental Response Team (ERT), and emergency response rulemaking and guidance development.

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### 3.1 REMOVAL ACTION PROCESS

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Removal actions are taken in response to a release or threat of release of a hazardous substance or of a pollutant or contaminant that may present an imminent and substantial danger to the public health or welfare. Examples of situations that may warrant removal actions include chemical spills or fires at production or waste storage facilities, transportation accidents involving hazardous substances, and illegal disposal of hazardous waste (midnight dumping). Exhibit 3.1-1 presents examples of the kinds of threats that may be posed by these situations and the types of corresponding removal actions that may be taken. Managed by a federal On-Scene Coordinator (OSC), a removal action is often short-term, and

addresses the most immediate threats. Removals comply with substantive applicable or relevant and appropriate requirements (ARARs) to the extent practicable, given the exigencies of the situation. ARARs are substantive requirements of federal and more stringent state environmental laws.

When notified of a release or threat of release that may require a removal action, the Agency (or lead-Agency) conducts a removal site evaluation to determine the source and nature of the release, the threat to public health and the environment, and whether an appropriate response has been initiated. A removal site evaluation could be completed in minutes or months, depending on the specific incident and the information available to determine the need for a removal action. When the removal site evaluation is completed, the Agency reviews the results and other factors to determine the appropriate extent of a removal action. At any point in this process, EPA may refer the site for further evaluation or determine that no further action is necessary. When it concludes that a removal action is required, the Agency undertakes an appropriate response to minimize or eliminate the threat.

The Agency defines three kinds of removal actions based on the time available before a response action must be initiated. “Emergency” removal actions require a prompt response at the site. “Time-critical” removal actions are conducted when the Agency (or lead-Agency) concludes that the action must begin within six months. For “non-time-critical” removal actions, the planning period may extend for more than six months; during this planning period, the lead agency conducts an engineering evaluation/cost analysis for the response action and seeks public comment on the response options.

### Exhibit 3.1-1 Typical Removal Actions

Threat Posed	Typical Removal Action Taken
Humans or animals have access to released hazardous substances, fire, or explosion	Installing fences, warning signs, or other security and site control precautions Removal of waste materials posing the threat Temporarily relocating residents in extreme situations
Precipitation or run-off from other sources (e.g., flooding) may enter the release area	Constructing drainage controls, such as run-off or run-on diversions
Failure of a structure such as a lagoon is likely	Stabilizing berms, dikes, or impoundments
Migration of hazardous substances into soil, ground water, or air is likely	Containing hazardous substances, such as capping contaminated soil or sludge Treating hazardous substances, including incineration Excavating highly contaminated soil Removing drums, barrels, tanks, or other bulk containers containing hazardous substances
Drinking water supply is contaminated	Providing alternate water supplies

Source: Office of Emergency and Remedial Response/Emergency Response Division.

51-044-20

To document the selection of a response action, the Agency prepares an action memorandum that states the authority for initiating the action, the action to be taken, and the basis for selecting the response. EPA also establishes an administrative record, compiling the documents that form the basis for the selection of the response action. The following sections discuss additional aspects of the removal action process, including community involvement, the role of the OSC, and CERCLA limitations on the scope of removal actions.

#### Community Involvement in Removal Actions

EPA provides many opportunities for community involvement during the removal process. The Agency appoints an official spokesperson to keep the public informed of the progress of a given removal action. The administrative record file and index of documents maintained at the central location is made available to the public (except confidential portions) at a repository near the site and at EPA

offices. If the removal action is expected to continue beyond 120 days, the lead agency must involve local officials and other parties in the process through such activities as community interviews and a community relations plan.

#### The On-Scene Coordinator

The OSC organizes, directs, and documents the removal action. The specific responsibilities of the OSC include conducting field investigations, monitoring on-scene activities, and overseeing the removal action. The OSC is also responsible for preparing a final report that describes the site conditions prior to the removal action, the removal action performed at the site, and any problems that occurred during the removal action.

#### Fund-Financed Removal Action Statutory Limits

Removal actions are generally short-term, relatively inexpensive responses to releases or threats of releases that pose a danger to human health,

welfare, or the environment. Accordingly, Congress included limitations on removal actions in CERCLA. The cost of a removal action is limited to \$2 million, and the duration is limited to one year. Congress established exemptions from these limitations for specific circumstances. A removal action may exceed the monetary and time limits if

- Continued response is required immediately to prevent, limit, or mitigate an emergency; there is an immediate threat to public health, welfare, or the environment; and such action cannot otherwise be provided on a timely basis; or
- Continued response action is otherwise appropriate and consistent with the remedial action (RA) to be taken.

During FY94, EPA granted 16 exemptions for removal actions to exceed the \$2 million limitation. In addition, EPA granted 26 exemptions allowing removal actions to continue for more than one year.

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## 3.2 FISCAL YEAR 1994

### PROGRESS

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Since the inception of Superfund, the Agency and PRPs have begun more than 3,360 removal actions at National Priorities List (NPL) and non-NPL sites to address threats to human health, welfare, or the environment posed by releases or potential releases of hazardous substances. Under SACM, the Agency is expanding its use of removal actions to further expedite response, especially at NPL sites.

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#### 3.2.1 Status Report on Removal Progress

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Of the more than 3,660 removal actions undertaken by EPA and PRPs under the Superfund program, nearly 310 were started in FY94 (see Exhibit 3.2-1). Of these 310 removal actions, PRPs financed 70 and EPA financed 240. The removal actions started by PRPs included 20 removal actions at NPL sites and 50 removal actions at non-NPL sites. EPA started nearly 40 removal actions at NPL sites and 200 removal actions at non-NPL sites. The

nearly 310 removal actions begun by EPA and PRPs in FY94 compare to 270 started in FY93.

As shown in Exhibit 3.2-2, EPA and PRPs have completed 3,050 removal actions under the Superfund program, including 240 in FY94. Of the 240 removal actions completed during the fiscal year, PRPs financed more than 50, including more than 10 at NPL sites and nearly 40 at non-NPL sites. EPA financed nearly 190 of the completed removal actions, including approximately 30 at NPL sites and 160 at non-NPL sites. The 240 removal actions completed by EPA and PRPs in FY94 compare to nearly 290 completed by EPA and PRPs in FY93.

Removal actions that were begun but are not yet complete are considered “ongoing.” Ongoing removals include actions that have been in progress less than 12 months at the end of a fiscal year and removal actions that have been granted exemptions from the statutory one-year duration limit. Sites where a removal action has taken place (including thermal treatment) but the contaminants have not yet been transported to a disposal facility are also defined as having ongoing removals.

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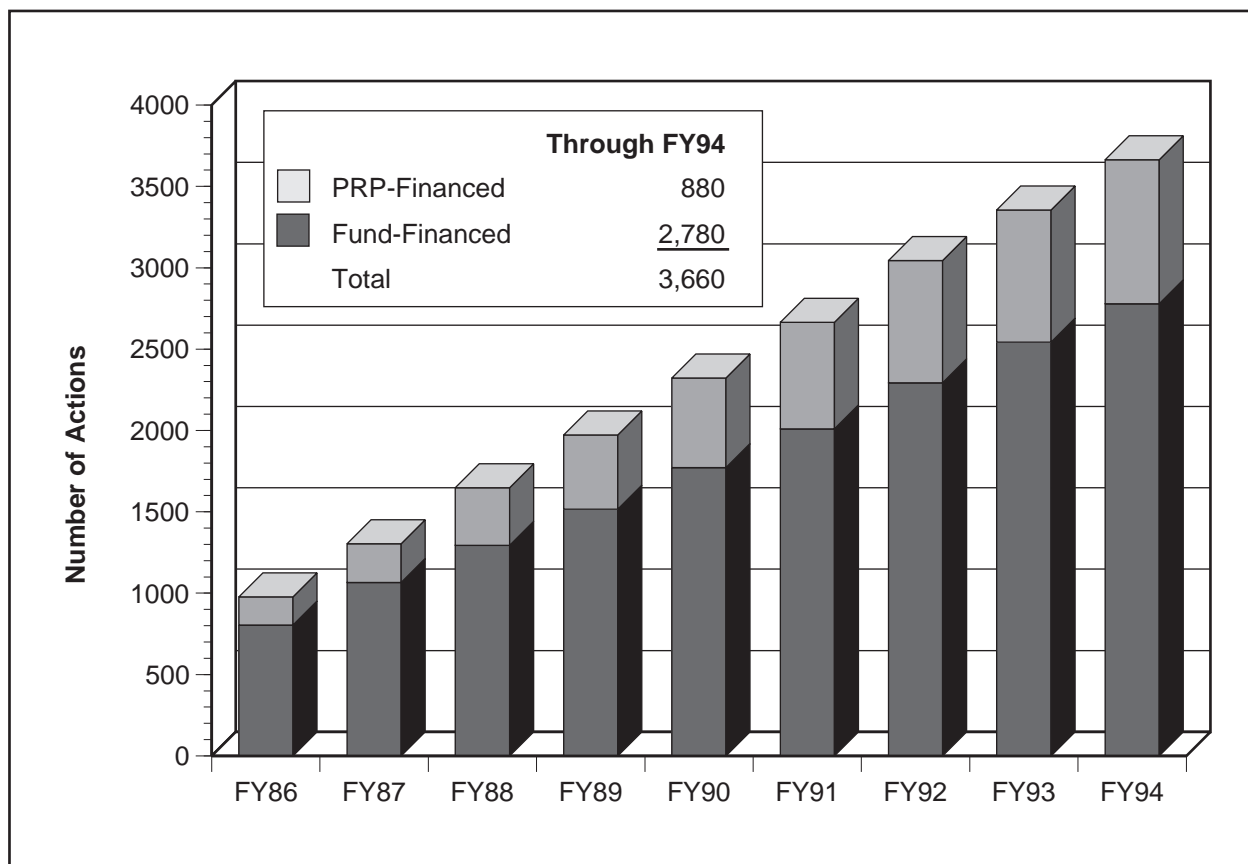
#### 3.2.2 Expanding the Use of Removal Authority

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One of the key elements of SACM is to expand the use of removal authority to perform “early actions” that reduce immediate risk more rapidly and expedite NPL site cleanups. Early actions can be emergency, time-critical, or non-time-critical removal responses or quick remedial responses.

As an incentive to implement this approach under SACM, the Agency set aside \$50 million in the RA budget to fund early actions. Although the directive announcing the availability of the set-aside funding was not issued until February 1992, over \$37 million was allocated for early actions at 13 sites in 7 Regions in FY92. In FY94, all of the set-aside funds plus an additional \$4.6 million was distributed to nine sites in six Regions. The funding, which was allocated on a first-come, first-serve basis, is intended to supplement, not replace, the Regions’ removal funds that have been traditionally used for response actions at NPL sites. The additional funding, coupled

**Exhibit 3.2-1**  
**Cumulative Removal Action Starts**



Source: CERCLIS.

51-044-26B

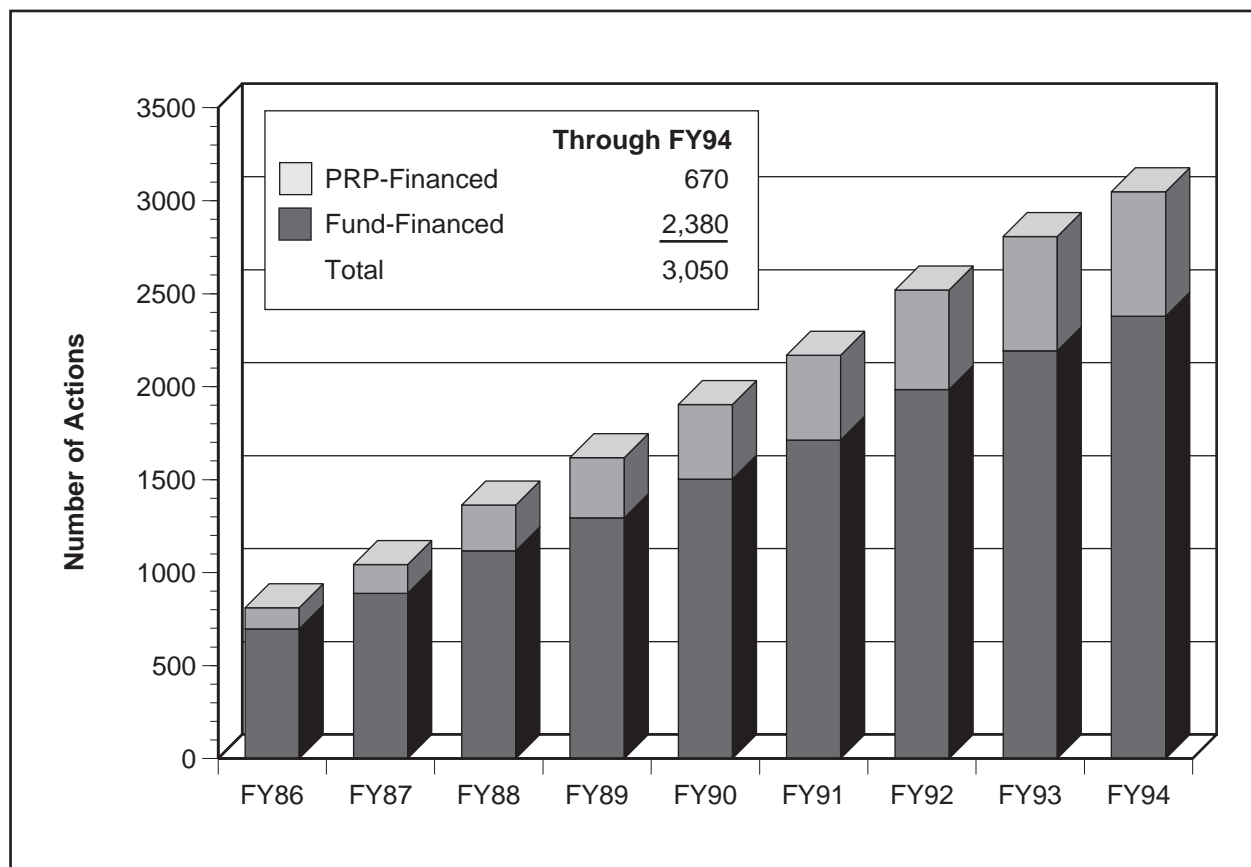
with the use of remedial funding directly under the Emergency and Rapid Response Services (ERRS) contracts, has significantly enhanced EPA's ability to expedite responses at key NPL sites. For example, the set-aside funding for FY94 allowed the Superfund program to initiate the additional nine early actions. (Additional information on SACM and the use of early actions is provided in Chapter 1.)

Due to the success of the approach, the Agency will continue to set-aside funds in the RA budget for early actions. The Agency is also making progress in awarding Regional ERRS contracts, which are the primary vehicle for implementing early actions. Regions 1 through 5 currently have ERRS contracts in place; Regions 6 through 10 continue to work on establishing ERRS contracts. The major obstacle to

implementing early actions to date has been the limited capacity of the ERRS contracts.

An example of an early action at an NPL site is the SACM pilot at the Better Brite site in DePere, Wisconsin. This pilot combined a time-critical removal response and a remedial investigation/feasibility study (RI/FS). Through early action, the Agency reduced immediate risk at the site by removing contaminated soils, demolishing buildings, and controlling the spread of contaminants in the ground-water plume. The early action also expedited the implementation of the overall site remediation. A subsequent RA will be taken to implement a pump-and-treat system to clean up the ground-water contamination.

**Exhibit 3.2-2**  
**Cumulative Removal Action Completions**



Source: CERCLIS.

51-044-25A

Another example of an early action is the Raymark site in Stratford, Connecticut. At this site, set-aside funding is being used to continue time-critical removal excavation activities at residential properties contaminated with lead, asbestos, and polychlorinated biphenyls (PCBs). The contamination is a result of the use of contaminated material from the Raymark facility as fill material throughout the surrounding area. Through the early action, contaminated material is being removed from residential properties and transported back to the Raymark facility where it will be dealt with as part of the overall RA for the facility. This early action is quickly and completely reducing immediate risk, while contributing to the acceleration of the overall site remediation.

### 3.3 ENVIRONMENTAL RESPONSE TEAM ACTIVITIES

Under the National Oil and Hazardous Substances Pollution Contingency Plan, EPA manages the ERT. Over its 14 years of service, this team of EPA experts has been available to OSCs and Remedial Project Managers to support removal and remedial actions 24 hours a day, 365 days a year. In addition to its response support, ERT conducts introductory and intermediate-level training courses in health and safety and other technical aspects of response. ERT provides expertise in emergency response, hazard assessment, health and safety, air

monitoring, alternative and innovative technology, site investigation, ecological damage assessment, clean-up contractor management, and oil and chemical spill control.

During FY94, ERT conducted approximately 103 removal actions and 79 RAs, and responded to 10 oil spills and 2 international incidents. ERT also offered 203 training courses nationwide.

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### 3.4 EMERGENCY RESPONSE REGULATIONS AND GUIDANCE

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Under the reportable quantity (RQ) regulatory program, the Agency proposed adjustments to certain RQs and to several administrative reporting exemptions. In addition, the Agency continued updating the Superfund Removal Procedures (SRP) Manual.

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#### 3.4.1 Reportable Quantity Regulations

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Section 102(b) of CERCLA, as amended, sets an RQ of one pound for hazardous substances, except those substances for which different RQs have been established in Section 311(b)(4) of the Clean Water Act. Section 102(a) of CERCLA authorizes EPA to adjust RQs for hazardous substances and to designate additional CERCLA hazardous substances.

Under CERCLA Section 103(a), the person in charge of a vessel or facility must immediately notify the National Response Center upon learning of a release of hazardous substance in a quantity that equals or exceeds its RQ. In addition to this reporting requirement, Section 304 of the Emergency Planning and Community Right-to-Know Act of 1986 requires that a release of a hazardous substance in a quantity that equals or exceeds its RQ (or one pound if a reporting trigger is not established by regulation) be reported to state and local authorities.

#### Reportable Quantity Adjustments

On October 23, 1993, EPA proposed changes to the designation, RQ, and notification requirements

for hazardous substances under CERCLA (58 FR 54836). The proposed changes revise the table of hazardous substances to

- Add 47 hazardous air pollutants and adjust their RQs;
- Add five other hazardous air pollutants that are broad generic categories of substances;
- Add and adjust the RQs for 10 hazardous wastes listed or proposed to be listed under RCRA; and
- Adjust the RQs for five hazardous wastes that were already on the table.

#### Reportable Quantity Exemptions

On November 30, 1992, the Agency proposed a rule to codify four administrative reporting exemptions for naturally occurring radionuclide releases from the requirements of CERCLA Section 103. The proposal would exempt such releases from

- Large, generally undisturbed land holdings, such as golf courses and parks;
- Disturbances of land for purposes other than mining, such as farming or building construction;
- The dumping of coal and coal ash at utility and industrial facilities with coal-fired boilers; and
- Coal and coal ash piles at utility and industrial facilities with coal-fired boilers.

The Agency has determined that administrative reporting requirements related to these releases serve no purpose. The rule is in accordance with the decision of the court in Fertilizer Institute v. United States Environmental Protection Agency 935 F.2d 1303 (D.C. Cir., 1991), wherein the court specified that the original promulgation of the exemptions in a final rule (54 FR 22524, May 24, 1989) did not provide sufficient notice and opportunity for public comment. The purpose of the November 30, 1992, proposal was to provide such notice and opportunity for comment. On March 5, 1993, at the request of several parties, the Agency reopened the comment period for an additional 60 days to provide greater opportunity for the public to evaluate the issues.

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### 3.4.2 Removal Guidance

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The SRP Manual covers all procedural and administrative requirements for removal actions. It is used by OSCs; removal, remedial, and enforcement personnel; and staff from other federal and state agencies. In FY90, EPA began restructuring the manual into a series of 10 stand-alone volumes, each addressing distinct aspects of Superfund removal

actions. EPA previously completed five volumes of the series: *Consideration of ARARs During Removal Actions*, *Removal Enforcement Guidance for On-Scene Coordinators*, *Public Participation Guidance for On-Scene Coordinators*, *Action Memorandum Guidance*, and *Response Reporting: POLREPs (pollution reports) and OSC Reports*. During FY94, the Agency continued working on the remaining five SRP volumes and an overview volume.

